DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains Patentability shall not be negatived by the manner in which the invention was made

1. Claims 18, 20, 22-24, 27-31, 33, 34, 40, 41, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkinson et al. (International Publication Number WO 00/41378) in view of Helms (U.S. Patent 5,952,992).

In reference to claim 18, Atkinson et al. discloses a method and system for control of a user interface (e.g. a display and keyboard) illumination of a hand held radiotelephone (see page 1, lines 5-7, 23-27 and Figures 1-2). Atkinson et al. discloses the radiotelephone to comprise of a housing to be held in a hand during use (see Figure 1, wherein a telephone, conventionally placed in hand to a user's ear when in use). Atkinson et al. discloses the radiotelephone to comprise of a display supported by a front surface (see #12, 14 of Figure 1). Atkinson et al. discloses a keymat in fixed positions relative to the display (see #13, 14 and cut outs of buttons on front surface #12 of Figure 1). Atkinson et al. discloses the backlight control of the invention to be applied to a radiotelephone (see Figure 1) which the Examiner interprets as inherently comprising cellular telephone electronics. Although Atkinson et al. does not explicitly disclose computing electronics to operate a personal information management application, Atkinson et al. does include a user interface to selected different backlight control profiles (see Figure 11). It is

well known in the art of telephony electronics for hand held devices comprising cellular telephone electronics to further offer at least a contacts user interface (which can easily be interpreted as a PIM application) for storing/viewing/editing user telephony data (Official Notice). Atkinson et al. further discloses the invention to comprise of a light detector (#21 of Figure 2) for detecting the level of light surrounding the device and converting it to electrical signals for a control means (#23 of Figure 2) to receive (see page 6, lines 18-20, 28-30). Atkinson et al. explicitly discloses adjusting the brightness behind the keymat based on detected light from the light detector (see page 1, lines 23-27, pages 3-4, lines 25-3 and Figures 2-3). Atkinson et al. further explicitly discloses adjusting a second characteristic of the device, the brightness of the display device based the level of the detected light (see page 1, lines 23-27, pages 3-4, lines 25-3 and Figures 2-3). Although Atkinson et al. discloses a single light detector, Atkinson et al. et al. does not explicitly disclose utilizing a plurality of light detectors. Helms discloses a method and apparatus for automatically adjusting the brightness of an LCD based upon ambient lighting conditions of the environment in which a laptop (handheld) computer is used (see column 2, lines 3-6, 8-18 and Figure 1). Helms discloses computing a weighted average of measured signals obtained by photodetectors (one on the front surface and another on the back surface of the display lid, see Figure 4) and using the computed average to index a lookup table (see columns 4-5, lines 66-2). Note, the Examiner interprets the weighted average of Helms functionally equivalent to Applicant's conditioned signal as the weighted average is based upon the average values of detected light measurements via the photodetectors. Again, this is seen as equivalent to Applicant's description of the "conditioned signal" (see paragraph 23). Lastly, Helms further discloses an embodiment of the invention wherein the greater AL

signal of the two photodetectors is utilized in indexing the lookup table (see columns 4-5, lines 52-2), which the Examiner interprets as ignoring a signal from one of the photodetectors when indexing the lookup table or generating the "conditioned signal." It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the automatic brightness controlling techniques of Helms with the user interface illumination techniques of Atkinson et al. in order to provide the computing electronics with a better representation of ambient light levels directed towards the device by supplying the electronics with multiple samples derived from the multiple sensors, thus the multiple samples providing more light detection at or around the device than using only one reading from one sensor. Such is particularly useful in situations in which light is directed towards the back of the LCD, hence toward the user's eyes, which light, while affecting the visibility of the LCD, might not be detected by the first photodetector (see column 2, lines 32-36 of Helms).

In reference to claims 20 and 30, Atkinson et al. and Helms disclose all of the claim limitations as applied to claims 18 and 29 respectively in addition, Atkinson et al. further explicitly discloses adjusting a second characteristic of the device, the brightness of the display device based the level of the detected light (see page 1, lines 23-27, pages 3-4, lines 25-3 and Figures 2-3). Also, Helms discloses utilizing signals from one or both of the photodetectors located on the front and back surface of the display lid, to adjust the brightness level of the LCD (see columns 4-5, lines 52-2).

In reference to claims 22 and 23, Atkinson et al. and Helms disclose all of the claim limitations as applied to claim 18 above. Although Atkinson et al. does not explicitly disclose computing electronics to operate a personal information management application, Atkinson et al.

does include a user interface to selected different backlight control profiles (see Figure 11). It is well known in the art of telephony electronics for hand held devices comprising cellular telephone electronics to further offer at least a contacts user interface (which can easily be interpreted as a PIM application) for storing/viewing/editing user telephony data (Official Notice). Further Helms discloses a performing the brightness processing techniques upon a laptop which is seen to inherently comprise of contact, calendar, word processing, spreadsheet and calculation applications. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement more widely used computer applications (such as calendar, contact information, word processing, spreadsheet and calculation applications) into a telephone in order to provide such valuable information to a user at all times, on-the-go for remote availability to edit/view/create new data entries.

In reference to claim 24, Atkinson et al. and Helms disclose all of the claim limitations as applied to claim 18. Helms discloses a method and apparatus for automatically adjusting the brightness of an LCD based upon ambient lighting conditions of the environment in which a laptop (handheld) computer is used (see column 2, lines 3-6, 8-18 and Figure 1). Helms discloses computing a weighted average of measured signals obtained by photodetectors (one on the front surface and another on the back surface of the display lid, see Figure 4) and using the computed average to index a lookup table (see columns 4-5, lines 66-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the automatic brightness controlling techniques of Helms with the user interface illumination techniques of Atkinson et al. in order to provide the computing electronics with a better representation of ambient light levels directed towards the device by supplying the electronics

with multiple samples derived from the multiple sensors, thus the multiple samples providing more light detection at or around the device than using only one reading from one sensor. Such is particularly useful in situations in which light is directed towards the back of the LCD, hence toward the user's eyes, which light, while affecting the visibility of the LCD, might not be detected by the first photodetector (see column 2, lines 32-36 of Helms).

In reference to claim 27, Atkinson et al. and Helms disclose all of the claim limitations as applied to claim 18 above. Although Helms does disclose performing the brightness processing techniques upon a laptop, neither Atkinson et al. nor Helms explicitly disclose the handheld computer configured to comprise of a touch screen display however, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to the implement a multitude of different types of displays (i.e. LCD of various pixel sizes, TFT, character matrix LCD etc.) in the radiotelephone device of Atkinson et al.. Applicant has not disclosed that specifically providing such explicit type of display, touch screen display, provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the display and fixed keymat buttons included in the radiotelephone device of Atkinson et al. or LCD of Helms, because the exact type of display included in a phone/laptop device is seen as a matter decided upon by the inventor and to which best suits the application at hand. Furthermore, the Examiner sees such a limitation as providing no immediate criticality to the invention at hand since the real scope of the invention is seemed to be directed to use of light sensors on a handheld device to adjust brightness/other parameters of the device and because the implementation of a touch screen display in a phone/laptop device would not affect the

operation, as per the scope of the claims, of the device as a whole in view of the sensing of light via such light sensors. Therefore, it would have been obvious to one of ordinary skill in this art to modify the combination of Atkinson et al. and Helms to obtain the invention as specified in claim 27.

In reference to claim 28, Atkinson et al. and Helms disclose all of the claim limitations as applied to claim 18 above. Helms discloses computing a weighted average of measured signals obtained by photodetectors (one on the front surface and another on the back surface of the display lid, see Figure 4) and using the computed average to index a lookup table (see columns 4-5, lines 66-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the automatic brightness controlling techniques of Helms with the user interface illumination techniques of Atkinson et al. in order to provide the computing electronics with a better representation of ambient light levels directed towards the device by supplying the electronics with multiple samples derived from the multiple sensors, thus the multiple samples providing more light detection at or around the device than using only one reading from one sensor. Such is particularly useful in situations in which light is directed towards the back of the LCD, hence toward the user's eyes, which light, while affecting the visibility of the LCD, might not be detected by the first photodetector (see column 2, lines 32-36 of Helms).

In reference to claim 29, Atkinson et al. discloses a method and system for control of a user interface (e.g. a display and keyboard) illumination of a hand held radiotelephone (see page 1, lines 5-7, 23-27 and Figures 1-2). Atkinson et al. discloses the radiotelephone to comprise of a housing to be held in a hand during use (see Figure 1, wherein a telephone, conventionally

placed in hand to a user's ear when in use). Atkinson et al. discloses the radiotelephone to comprise of a display supported by a front surface (see #12, 14 of Figure 1). Atkinson et al. discloses a keymat in fixed positions relative to the display (see #13, 14 and cut outs of buttons on front surface #12 of Figure 1). Atkinson et al. discloses the backlight control of the invention to be applied to a radiotelephone (see Figure 1) which the Examiner interprets as inherently comprising cellular telephone electronics. Although Atkinson et al. does not explicitly disclose computing electronics to operate a personal information management application, Atkinson et al. does include a user interface to selected different backlight control profiles (see Figure 11). It is well known in the art of telephony electronics for hand held devices comprising cellular telephone electronics to further offer at least a contacts user interface (which can easily be interpreted as a PIM application) for storing/viewing/editing user telephony data (Official Notice). Atkinson et al. further discloses the invention to comprise of a light detector (#21 of Figure 2) for detecting the level of light surrounding the device and converting it to electrical signals for a control means (#23 of Figure 2) to receive (see page 6, lines 18-20, 28-30). Atkinson et al. explicitly discloses adjusting the brightness behind the keymat based on detected light from the light detector (see page 1, lines 23-27, pages 3-4, lines 25-3 and Figures 2-3). Although Atkinson et al. discloses a single light detector, Atkinson et al. et al. does not explicitly disclose utilizing a second of light detectors. Helms discloses a method and apparatus for automatically adjusting the brightness of an LCD based upon ambient lighting conditions of the environment in which a laptop (handheld) computer is used (see column 2, lines 3-6, 8-18 and Figure 1). Helms discloses computing a weighted average of measured signals obtained by photodetectors (one on the front surface and another on the back surface of the display lid, see

Figure 4) and using the computed average to index a lookup table (see columns 4-5, lines 66-2). Lastly, Helms further discloses an embodiment of the invention wherein the greater AL signal of the two photodetectors is utilized in indexing the lookup table (see columns 4-5, lines 52-2), which the Examiner interprets as ignoring a signal from one of the photodetectors when indexing the lookup table or generating the "conditioned signal." It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the automatic brightness controlling techniques of Helms with the user interface illumination techniques of Atkinson et al. in order to provide the computing electronics with a better representation of ambient light levels directed towards the device by supplying the electronics with multiple samples derived from the multiple sensors, thus the multiple samples providing more light detection at or around the device than using only one reading from one sensor. Such is particularly useful in situations in which light is directed towards the back of the LCD, hence toward the user's eyes, which light, while affecting the visibility of the LCD, might not be detected by the first photodetector (see column 2, lines 32-36 of Helms).

In reference to claim 31, Atkinson et al. and Helms disclose all of the claim limitations as applied to claim 30 above. Helms discloses computing a weighted average of measured signals obtained by photodetectors (one on the front surface and another on the back surface of the display lid, see Figure 4) and using the computed average to index a lookup table (see columns 4-5, lines 66-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the automatic brightness controlling techniques of Helms with the user interface illumination techniques of Atkinson et al. in order to provide the computing electronics with a better representation of ambient light levels directed towards the device by

supplying the electronics with multiple samples derived from the multiple sensors, thus the multiple samples providing more light detection at or around the device than using only one reading from one sensor. Such is particularly useful in situations in which light is directed towards the back of the LCD, hence toward the user's eyes, which light, while affecting the visibility of the LCD, might not be detected by the first photodetector (see column 2, lines 32-36 of Helms).

In reference to claims 33 and 34, Atkinson et al. and Helms disclose all of the claim limitations as applied to claim 29 above. Helms discloses a method and apparatus for automatically adjusting the brightness of an LCD based upon ambient lighting conditions of the environment in which a laptop (handheld) computer is used (see column 2, lines 3-6, 8-18 and Figure 1). Helms discloses computing a weighted average of measured signals obtained by photodetectors (one on the front surface and another on the back surface of the display lid, see Figure 4) and using the computed average to index a lookup table (see columns 4-5, lines 66-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the automatic brightness controlling techniques of Helms with the user interface illumination techniques of Atkinson et al. in order to provide the computing electronics with a better representation of ambient light levels directed towards the device by supplying the electronics with multiple samples derived from the multiple sensors, thus the multiple samples providing more light detection at or around the device than using only one reading from one sensor. Such is particularly useful in situations in which light is directed towards the back of the LCD, hence toward the user's eyes, which light, while affecting the visibility of the LCD, might not be detected by the first photodetector (see column 2, lines 32-36 of Helms).

In reference to claims 40 and 41, Atkinson et al. and Helms disclose all of the claim limitations as applied to claim 18 above. Although both Atkinson et al. and Helms disclose light sensors provided on a front surface of a device housing, neither explicitly disclose the plurality of light sensors provided on the same surface of the housing. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to mount multiple light sensors on the same surface of a device, utilizing the photodetector measurement/averaging techniques of Helms to obtain a more accurate reading of light affecting the viewability of the device because as is well known in the art of computer processing, many data samples provides more detail than a single sample (Official Notice). Therefore, providing many photodetector measurements as opposed to one measurement, would provide a more accurate reading of surrounding light thereby leading to a more enjoyable display of data from the device.

In reference to claims 44 and 45, Atkinson et al. and Helms disclose all of the claim limitations as applied to claim 29 above. Helms discloses computing a weighted average of measured signals obtained by photodetectors (one on the front surface and another on the back surface of the display lid, see Figure 4) and using the computed average to index a lookup table (see columns 4-5, lines 66-2). Note, the Examiner interprets the weighted average of Helms functionally equivalent to Applicant's conditioned signal as the weighted average is based upon the average values of detected light measurements via the photodetectors. Again, this is seen as functionally equivalent to Applicant's description of the "condoned signal" (see paragraph 23).

2. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atkinson et al. (International Publication Number WO 00/41378), Helms (U.S. Patent 5,952,992) and further in view of Alderman et al. (U.S. Patent 5,828,056).

In reference to claim 39, Atkinson et al. and Helms disclose all of the claim limitations as applied to claim 18 above. Although Helms discloses ignoring signals from one of the photodetectors located on the front or back surface of the display lid, to adjust the brightness level of the LCD (see columns 4-5, lines 52-2), neither Atkinson et al. nor Helms explicitly disclose the ignored signal being identified as aberrant. Alderman et al. discloses a photodetector system that is able to discriminate between different types of light (see column 1, lines 7-13). Alderman et al. explicitly discloses the photodetector utilized in capturing reflected light whereby multiple beams of light are captured with the invention capable of ignoring spurious high signals that are abnormalities in the system (see column 3, lines 16-51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the abnormal light beam detection theory of Alderman et al. with the automatic brightness controlling techniques of Helms and the user interface illumination techniques of Atkinson et al. in order set in place, an "error-checking" test of ambient light signals wherein abnormal or out-of-normal-range signals are not factored in when setting display characteristics which would ultimately lead to a more precise and viewer friendly display system.

Response to Arguments

3. Applicant's arguments filed 07/29/09 have been fully considered but they are not persuasive.

In reference to the claims, Applicant argues that the Atkinson and Helms references teach away from their combination because Atkinson stresses the many benefits and advantages of locating a light detector under a display, while Helms teaches utilizing a second photodetector on

an opposite side of a laptop lid from the display where the photodetector would not detect any of the light from the display illuminator or the actual ambient light incident on the display as discussed in Atkinson (see pages 7-9 of Applicant's Remarks). In response, the Examiner disagrees. Firstly, the Applicant seems to believe that the ambient light discussed in Atkinson is only "ambient light incident on the display" however Atkinson explicitly states, "The light detector 21 detects the level of light surrounding the device…" (see page 6, line 28). Therefore, the ambient light of Atkinson can surely be considered all of the natural/artificial light surrounding the display. This is pertinent to the teaching of Atkinson and the combination of Atkinson and Helms because Helms discloses, as discussed by Applicant on page 9 of Applicant's Remarks, detecting ambient light directed towards the backside of the device. Therefore, the teachings of Atkinson are directly applicable to the teachings of Helms and one of ordinary skill in the art would surely not believe that the references teach away from one another. Applicant's indication of the location of the light detector in Atkinson as critically placed around the display is obvious to the Atkinson's desire to detect backlighting off of the diffuser of the display. However, again, Atkinson also explicitly discloses the desire to detect "light surrounding the device" which the Examiner interprets as equivalent to even light "behind" the display as Helms teaches. Therefore the Examiner maintains the above rejection with the combination of Atkinson and Helms.

In reference to the claims, Applicant argues that modifying the teachings of Atkinson with the teachings of Helms would change the principle of operation of Atkinson since a second light detector on the rear side of the display in Atkinson would likely detect a very different light level than that desired in Atkinson and would not permit the device of Atkinson to operate as

intended (see pages 9-10 of Applicant's Remarks). In response, the Examiner disagrees. Firstly, taking into consideration the reply to Remarks above, the addition of a second light detector in Atkinson would only provide the support for a more accurate sense of light surrounding the display/device. Applicant's indication that this additional detector would, "...detect a very different light level..." might, in fact, be true however this is exactly the rationale for implementing more than one light detector, that is, to detect the widest, most number of light samples for ambient light in order to derive a more accurate sense of such ambient light. Again, this would not change the principle operation of the device of Atkinson as the incorporated teachings of Helms further disclose how to "deal" with detected light from the additional detector (see at least, columns 4-5, lines 52-2 of Helms). Even further, the addition of such a detector behind the display in Atkinson could further aid in the determination of the backlight setting since it is clear that light behind a display effects viewability. Therefore, one of ordinary skill in the art would surely realize that modifying the teachings of Atkinson with Helms would not change the principle operation of the device but in fact, would actually aid in the operation of the device and hence the Examiner maintains the above rejection based upon the combination of Atkinson and Helms.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (571) 272-7781. The examiner can normally be reached Monday-Friday between 7:00 AM and 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung, can be reached at (571) 272-7794.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

571-273-8300 (Central Fax)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (571) 272-2600.

/Antonio A Caschera/

Primary Examiner, Art Unit 2628

10/22/09